

CLAIMS

1. A method for enforcing a distribution policy with respect to information transmitted from a sending fax machine to a recipient fax machine as fax traffic, the method comprising:
 - 5 (a) defining an information distribution policy with respect to said fax traffic;
 - (b) monitoring the fax traffic in accordance with said distribution policy, said monitoring comprising:
 - 10 (i) dc-modulating said fax traffic being monitored into a digital stream;
 - (ii) reconstructing from said digital stream a graphic image representing at least part of the information within said fax traffic; and
 - 15 (iii) analyzing information within said reconstructed image, and
- (f) applying said distribution policy with respect to said analyzed fax traffic.
- 20 2. A method according to claim 1 further comprising:
 - initially forwarding said fax traffic from a sending fax device to a
an intermediate fax modem attached to a digital storage device;
 - applying said monitoring to said fax traffic stored at said digital storage device, and
- 25 (25) sending the information as fax in accordance with said distribution policy from said digital storage device to a recipient fax device.
3. A method according to claim 1, wherin said applying said distribution policy comprises applying said distribution policy according

to the results of said analyzing information within said reconstructed image.

4. A method according to claim 1, wherein said analyzing information within said reconstructed image comprising performing optical character recognition over the fax data.

5. A method according to claim 4, whercin said analyzing information within said reconstructed image further comprising identification of the source of the faxed document.

6. A method according to claim 4, wherein said analyzing information within said reconstructed image further comprises identification of key-words or key phrases within the fax message.

15 7. A method according to claim 1, whercin said applying of said pre-defined policy comprises adding forensic information to said document.

20 8. A method according to claim 1, wherein said policy comprises determining at least one of the following:

the set of authorized recipients, and
the required action.

25 9. A method according to claim 1, wherein said policy comprises at least one of the following:

blocking said transmission;
logging a record of a fax transmission event and its dctails, and
reporting about said fax transmission event and its details
30 according to a pre-defined policy.

10. A method according to claim 8, wherein said applying said policy comprises blocking the transmission to unauthorized recipients.

11. A method according to claim 10, wherein said blocking is applied
5 according to said recipient's phone-numbers.

12. A method according to claim 8, wherein identifying said recipient's phone-numbers comprises transforming said recipient's phone-number to a Domain-Name Server address.

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13. A method according to claim 9, wherein said logged record comprises the sender, the recipients and the identity of said faxed document.

15 14. A method according to claim 1, wherein said monitoring said fax traffic effected by said distribution policy comprises eavesdropping on said fax traffic.

20 15. A method according to claim 1, wherein said distribution policy comprises putting a marker on fax messages, said marker allowing automatic identification or classification of the fax and its content.

25 16. A method according to claim 1, wherein said distribution policy comprises embedding details of a sender on the sent message.

17. A method according to claim 16, wherein said embedding of said details comprises embedding the details in a substantially imperceptible manner.

18. A method according to claim 17, wherein said embedding of said details in a substantially imperceptible manner is robust to fax encoding and to attempts to deliberately remove said encoding.
- 5 19. A method according to claim 1, wherein said distribution policy comprises encrypting at least part of the faxed message.
20. A method according to claim 19, wherein a cryptographic key for decrypting said encrypted message is sent via another channel.
- 10 21. A method according to claim 1, wherein said policy comprises sending the fax directly to a voice mailbox of a recipient.
- 15 22. A method according to claim 2, wherein said sending fax comprises an analog fax machine.
23. A method according to claim 22, wherein said forwarding said fax traffic to said modem comprises:
 - simulating a switch and a receiving fax;
 - 20 receiving the dialed digits and the sent fax;
 - simulating a sending fax, and
 - sending the fax to a modem attached to said digital storage device.
- 25 24. A method according to claim 23, wherein said switch is simulated using a central-office card.
25. A method according to claim 22, wherein said forwarding said fax traffic to said modem comprises forwarding using a hot-line mechanism.

26. A method according to claim 25, wherein said hot-line is provided by a local PBX switch or a remote switch.
27. A method according to claim 25, wherein said forwarding occurs before dialing occurs, and said modem receives the dialing directly after an off-hook is received.
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28. A method according to claim 22, wherein said forwarding said fax traffic to said intermediate fax modem comprises:
10 instructing the fax users to dial a specific number, said number corresponding to the extension number of said modem;
 instructing the fax users to pause after dialing said specific number and then to dial the intended recipient fax number.
- 15 29. A method according to claim 28, wherein said fax is sent using said intended recipient fax number dialed by the user.
30. A method according to claim 22, wherein said method is applied within said sending fax device utilizing dedicated hardware for said
20 monitoring.
31. A method according to claim 1, wherein applying said distribution policy is done using a central computer with respect to a plurality of fax machines or fax servers.
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32. A method according to claim 1, applied to enforce an overall organization's distribution policy in conjunction with enforcement over other additional electronic distribution channels.
- 30 33. A method according to claim 32, wherein said additional electronic distribution channels comprise e-mail.

34. A fax traffic interception device for enforcing a distribution policy with respect to information transmitted from a sending fax machine to a recipient fax machine as fax traffic, the device comprising:

- 5 (a) a policy storage device for storing a predefined information distribution policy with respect to said fax traffic;
- 10 (b) a fax traffic monitor unit for monitoring the fax traffic, said monitor unit comprising:
 - (i) a fax traffic de-modulator for de-modulating said fax traffic being monitored into a digital stream;
 - (ii) a data reconstruction unit for reconstructing from said digital stream a graphic image representing at least part of the information within said fax traffic; and
 - (iii) an image analyzer for obtaining information regarding content of a respective fax from within said reconstructed image, and
- 15 (c) an enforcement unit associated with said monitoring unit for applying said distribution policy with respect to said analyzed fax traffic.

20 25 35. The fax traffic interception device of claim 34, comprising mimic circuitry for mimicking said receiving fax machine to said sending fax machine and for mimicking said sending fax machine to said receiving fax machine, thereby to intercept and subsequently send on said fax traffic.

36. The device of claim 34, wherein said image analyzer is configured to obtain from said reconstructed image an identification of the source of the faxed document.

37. The device of claim 34, wherein said enforcement unit is configured to apply said pre-defined policy by adding forensic information to said document.

5 38. The device of claim 34, wherein said applying said policy comprises blocking the transmission to unauthorized recipients.

39. The device of claim 34, further comprising a switch simulated using a central-office card.

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40. The device of claim 34, configured to forward said fax traffic to said modem using a hot-line mechanism.

15 41. The device of claim 40, configured to apply said forwarding prior to dialing, wherein said modem receives a dialing signal directly after an off-hook signal is received.

42. A method for enforcing a distribution policy with respect to
20 information transmitted via fax server, the method comprising:

(a) defining an information distribution policy with respect to said fax traffic;

(b) monitoring the fax traffic in accordance with said distribution policy, said monitoring comprising:

25 (i) reconstructing from said digital stream a graphic image representing at least part of the information within said fax traffic; and

(ii) analyzing information within said reconstructed image, and

30 (c) applying said distribution policy with respect to said fax traffic.

43. A fax traffic interception device for enforcing a distribution policy with respect to information transmitted via fax server, fax traffic, the device comprising:

- 5 (a) a policy storage device for storing a predefined information distribution policy with respect to said fax traffic;
- (b) a fax traffic monitor unit for monitoring the fax traffic, said monitor unit comprising:
 - (i) a data reconstruction unit for reconstructing from said digital stream a graphic image representing at least part of the information within said fax traffic; and
 - (ii) an image analyzer for obtaining information regarding content of a respective fax from within said reconstructed image, and
- 10 (c) an enforcement unit associated with said monitoring unit for applying said distribution policy with respect to said fax traffic.